

ANNUAL REPORT: FY 2014 COOPERATIVE RECOVERY INITIATIVE DUSKY GOPHER FROG

Project Name: Dusky gopher frog breeding pond restoration and population establishment on the Mississippi Sandhill Crane National Wildlife Refuge

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Project Location: Mississippi Sandhill Crane National Wildlife Refuge

Project Goal: The long-term goal of the project is to create a dusky gopher frog metapopulation within the Mississippi Sandhill Crane National Wildlife Refuge

Expected Conservation Outcome of the Project: The project will contribute to the endangered dusky gopher frog's recovery efforts by expanding the available habitat for the species and increasing the limited number of its breeding sites. The project will also contribute to the recovery of the endangered Mississippi sandhill crane by improving both its upland and breeding habitat.

Project Measureable Objectives (Year 2):

- Remove hardwoods and brush from ponds; smooth pond basin contours
- Conduct prescribed burning of pond basins and surrounding uplands
- Monitor hydrology of ponds to be restored as dusky gopher frog breeding sites
- Construct drift fence surrounding pond selected as initial translocation site

How are objectives measured: Direct observation and accounting of management activities

Project Measureable Objectives (Long-term):

- Release metamorphic dusky gopher frogs into restored/created ponds
- Document presence of calling male dusky gopher frogs and evidence of breeding
- Establish a dusky gopher frog population

How are objectives measured:

- Pond hydrology-- Monitor by direct observation and through the use of depth gauges
- Metamorphic frog releases-- Observe and record numbers of released metamorphs
- Calling males and evidence of breeding-- Use automated recorders and survey ponds for egg masses
- Population establishment-- Monitor the population through the use of a drift fence

Assessment of Short-term Performance (Year 2):

- **80 -- 89% conservation objective achieved**

Assessment of Long-term Performance this year:

- **Less than 70% conservation objective achieved**

Project Status:

Considerable restoration work was conducted in uplands surrounding the three ponds on the refuge initially selected as translocation sites, and within the ponds themselves. This work included prescribed burning of a total of 1,031 acres and pond contouring work at two ponds. A water control structure was installed at one of the ponds. A contract for invasive species treatment of the area of the three ponds has been awarded and will be implemented by the end of calendar year 2014. Project funds were used for purchases, such as materials for drift fence construction, cattle tanks, and automated recorders, to be used in future dusky gopher frog monitoring. Despite unusually wet weather, we were able to complete 90 percent of contouring work in one pond and 75 percent of contouring work in another. A fourth pond, with drier uplands surrounding it, was located and selected by project partners as an additional release site. Observations of this pond ("Sawdust Pond") have verified that the hydrology is appropriate for dusky gopher frog breeding. The decision was made to use Sawdust Pond as the first translocation site and to encircle it with a drift fence. A contract for installation of the drift fence has been awarded and the drift fence will be constructed by the end of calendar year 2014. A secure site on the refuge was found for placement of cattle tanks for raising dusky gopher frog tadpoles for Sawdust Pond. Work will continue at the three ponds initially selected as translocation sites when they dry completely so that habitat damage will be prevented. When habitat restoration has been completed at these sites, they will be considered secondary sites for future releases.

Future Actions:

In FY 15, we plan to raise dusky gopher frog tadpoles in cattle tanks at the refuge and to release metamorphic frogs at Sawdust Pond. A temporary technician (intern) will work at the refuge and coordinate with dusky gopher frog researchers on this effort. The feasibility of creating an additional pond in the vicinity of Sawdust Pond will be explored. In FY 16, automated recorders will be placed at Sawdust Pond to capture calls of frogs breeding at the site and the drift fence will be monitored for movements of frogs into and out of the pond.



Figure 1. Results of Duck Pond Restoration Work, September 24, 2014.



Figure 2. Results of East Flat Pond Restoration Work, September 24, 2014